Communicable Disease Control

TERRITORY OF HAWAII

Honolulu. Chamber of Commerce. Committee on
Communicable Diseases

POSTWAR PLANNING COMMITTEES ON HEALTH

PUBLIC HEALTH COMMITTEE

CHAMBER OF COMMERCE OF HONOLULU

1947

N. M. Nebelung, DR. P. H.

EXECUTIVE DIRECTOR, PUBLIC HEALTH FUND
CHAMBER OF COMMERCE OF HONOLULU

RECOMMENDATIONS

OF THE

COMMITTEE ON COMMUNICABLE DISEASES

POSTWAR HEALTH PLANNING COMMITTEES

PUBLIC HEALTH COMMITTEE

CHAMBER OF COMMERCE OF HONOLULU

September, 1947

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of the
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FOREWORD

One of the outstanding achievements of the past half-century in the field of medicine and public health, has been the marked decline in the number of deaths from communicable diseases.

Much of this decrease has been due to improved sanitation and to the discovery of immunization procedures. The gradual assimilation of information concerning the nature and spread of communicable diseases by the public has also had its effect.

It is easy to forget, in the light of present accomplishments, that our relative freedom from epidemic disease depends upon constant vigilance and attention to preventive measures. In many areas, our knowledge is incomplete, and we must rely entirely upon isolation techniques and general control measures, until more specific means of prevention are discovered.

An enlightened and alert public is essential to a successful campaign against communicable disease. The following four reports contain an admirable account of the general problem and the progress that has been made against leprosy, tuberculosis and venereal diseases in the Territory. The suggestions herein should serve as a blueprint for further developments in the control of these diseases.

F. J. Pinkerton, M.D., Chairman
Public Health Committee
Chamber of Commerce of Honolulu

INTRODUCTION

Communicable disease control is the oldest of public health activities. Care of environmental sanitation was the only method used at first. Other methods such as immunization, isolation, quarantine and control of insect vectors have been added to our methods of combating infectious diseases.

During the present century the control of contagious diseases in the Territory and in the United States as a whole, has been so successful as to cause a sharp reduction in the morbidity and mortality rates of these diseases. However, continued vigilance is necessary to prevent an upswing of this type of disease which spreads directly from person to person or indirectly through an intermediate host.

Each community has a somewhat different problem of communicable disease control, in accordance with climate, insect population, and incidence of population, nutrition, racial make-up of population and other factors. In our Territory we do not have to concern ourselves with local activities for the control of such diseases as malaria, cholera, yaws or yellow fever, except those activities which will prevent their introduction here. On the other hand, tuberculosis and leprosy are more of a problem with us than in most mainland states. Although our venereal disease rates are low, this type of disease can spread rapidly in any community and continued alertness in the application of all known types of control measures is necessary to maintain this low rate or to decrease it further.

Of all the communicable diseases, tuberculosis is the leader in causing deaths in Hawaii. In fact, only a few states have a higher death rate from this disease than our Territory. Consequently, it is necessary for us to place major emphasis on control measures for tuberculosis, including case finding through chest x-rays, hospitalization of infectious cases and rehabilitation of treated persons.

The group of people who prepared these reports are leaders in their fields in Hawaii. Serious consideration of their suggestions should be given by all persons concerned with communicable disease control in future years. We have come a long way toward conquering most of our communicable diseases. Further coordinated community effort of the type depicted in this study will enable us to relegate nearly all such diseases into the field of rarity.

Charles L. Wilbar, Jr., M. D.
Chairman, Steering Committee

PUBLICATION PROCEDURES AND RESPONSIBILITY FOR REPORTS

Reports of the postwar planning health committees are prepared by the several study groups with the aid of the Public Health Committee staff of the Chamber of Commerce. Staff members meet regularly with the groups during the course of study.

A tentative final report in outline form is submitted to the Steering Committee for review. The study group chairman then meets with the Steering Committee which advises, offers suggestions regarding changes, and then refers the project back to the study group for further consideration. The final revision is resubmitted to the Steering Committee for approval both in outline and narrative forms. The purpose of the outline is to enable anyone to appraise readily the present status of a particular program and the recommendations of the study committee without having to peruse the entire report. Each finally revised report will include any dissenting opinions of the committee members which they may request be published. Reports are issued as the work of the particular committee preparing them. Individual recommendations may be considered to represent the view of the committee as a whole.

R. G. Nebelung, Dr. P. H.
Executive Director
Public Health Committee

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SUBCOMMITTEE ON LEPROSY CONTROL

Harry L. Arnold, M.D., Chairman
E. K. Chung-Hoon, M.D.
Norman Sloan, M.D.

OUTLINE OF SUGGESTED RECOMMENDATIONS

Subcommittee on Leprosy Control
of the
Committee on Communicable Diseases
Postwar Planning Committees for Health

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
I. Legal Status		
A. Control vested in:		
1. Territorial Board of Hospitals and Settlement (certification of new cases, isolation of infectious cases and parole of non-infectious ones and full discharge of healed cases.)		
B. Supporting legislation: Revised Laws of Hawaii, 1945, Chapter 43.		
II. Facilities		
A. Institutions maintained		
1. Board's clinic for periodic examination of parolees, suspects, and contacts; also, routine care for patients and their families.		

Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Long-range Objectives or Action
	It is recommended that:	It is recommended that:
2. Kalihi Receiving Station and Hospital for isolation of early cases.	The U. S. Public Health Service Leprosy Investigation Station be reestablished.	X-Ray and other laboratory equipment be installed.
3. Kalaupapa Settlement for isolation of advanced cases and infected children.	Additional staff quarters be constructed.	Present plans and suggestions for improvement of Kalaupapa Settlement and Kalihi Hospital be carried out as funds and opportunity avail.
III. Personnel A. General Administration: Superintendent Business Manager Secretary Clerks (6) Social Worker Nurse Physician (part-time) Clinic attendant		
B. Kalihi Hospital Administrator Physician (part-time) Dentist (part-time) Nurse Supervisor Nurses (3) Others (17) Note: Approximately 13 inmates employed monthly (part-time) for maintenance of grounds and buildings.	U. S. Public Health Service provide a resident physician and laboratory technician (full-time basis).	

Present Situation (Services and Resources	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	It is recommended that:
C. Kalaupapa Settlement Administrator Resident Superintendent Institution Administrator Maintenance Superintendent Physicians (3) Dentist (part-time) Nurse Supervisor Nurses (13) Technicians (2) Clerks (3) Others (66) Note: Approximately 166 inmates employed monthly on maintenance activities		
IV. Program A. Epidemiology		
1. Case finding now limited to detecting hitherto unrecognized cases in private doctors' offices.	All natives coming from Asiatic and South Pacific countries be carefully screened by the Board of Health authorities in cooperation with the physicians of the Board of Hospitals and Settlement.	All school physicians and nurses in the Territory be given specific instructions in detecting early juvenile cases.
2. Contact investigation. Public Health Nurses bring contacts to the Board's clinic and undertake follow-up of parolees, etc.		
3. Case holding now ef-		

Present Situation (Service and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
fected chiefly by voluntary cooperation of parolees, partly by public health nurses' assistance.	It is recommended that:	It is recommended that:
B. Diagnostic Vested in Board's clinic under direction of Board's physician.		
C. Prophylaxis 1. Children removed at birth from leprous mothers.		
2. Parolees generally not permitted to live with children or to handle food.		A specific rule might be preferable to a policy of judging each case on its own merits.
D. Education 1. No program informing public regarding nature of the disease, and method of treatment.	Radio talks be given and other educational materials be prepared under direction of authorities in this field and disseminated to the public.	A health museum be established in Honolulu under sponsorship of the Public Health Committee of the Chamber of Commerce and other interested groups, in which leprosy can be presented as a phase of a general health education program.

LEPROSY ADMINISTRATION IN THE TERRITORY

Introduction

The Territory of Hawaii has been known to be an endemic focus of leprosy for over 125 years. It is not definitely known how the disease was first introduced into the Territory, but its presence was noticeable in the early 1800's. By 1864 the disease had reached epidemic proportions and a law "to prevent the spread of leprosy" was passed on January 3, 1865, by the legislature of the then Kingdom of Hawaii during the reign of King Kamehameha V. Compulsory segregation of leprous patients was inaugurated, and this method of treatment of leprosy has been, and still is, in force. Under the statutes it is mandatory for an individual suspected of being afflicted with leprosy to submit to a physical examination to determine whether or not said person is afflicted with the disease. The diagnosis of leprosy is made legally by the government's leprologist or by a board of three physicians (one chosen by the patient, one chosen by the Territorial Government, and one by the Territorial Medical Association) depending upon the patient's desires. If he is found not to have leprosy, he is given a certificate of discharge from custody. If he does have leprosy, he is so certified and committed to the care and treatment prescribed by the Territorial Board of Hospitals and Settlement at public expense.

Between 1865 and 1946 about 8,358 leprous patients have been isolated at Kalihi Hospital and Kalaupapa Settlement. Over 4,000 of these occurred in the 25-year period previous to 1890 and about 4,358 in the past 55 years. The fact that it required 55 years to accumulate about the same number of leprous patients as it did for the first 25 years of the existence of the segregation law seems to indicate that compulsory isolation of a contagious disease had an important part in reducing its incidence.

The eradication of leprosy is being achieved under this program in the Territory. During the past 14 years the total number of known active cases has decreased from 623 on July 1, 1931, to 349 on July 1, 1945. The number of new cases identified each year is also decreasing, and at an accelerated rate. The following table shows the number of new cases discovered for the fiscal years 1931-1947. The Settlement will eventually have to close for want of patients. When its census is reduced to less than one hundred patients, perhaps it would be more efficient and satisfactory to move it to an isolated convalescent home type of institution.

1931-1932	60	1935-1936	50
1932-1933	63	1936-1937	51
1933-1934	63	1937-1938	46
1934-1935	48	1938-1939	35

1939-1940	38	1943-1944	34
1940-1941	32	1944-1945	24
1941-1942	27	1945-1946	27
1942-1943	41	1946-1947	33

Prior to 1931, leprosy administration was in the hands of the Territorial Board of Health. For various reasons the legislature of 1931 caused a change in the administration of affairs pertaining to leprosy and created the Board of Hospitals and Settlement with all the powers concerned with the control of leprosy heretofore vested in the Board of Health. The Board of Hospitals consists today of five members appointed by the Governor for terms of four years. The Board appoints a general superintendent who supervises the various divisions which include the main administrative office, the Board's Clinic, Kalihi Hospital, and Kalaupapa Settlement.

Main Administrative Office

This division is under the direct supervision of the General Superintendent with offices located in the Territorial Office Building. As the name implies, the functions of this office are purely administrative which include purchasing, supplying, and financing of all the divisions of the Board of Hospitals. A welfare worker is located here who maintains contact with the patients on temporary release, children of leprous parents, and other relatives of patients.

The Board's Clinic

This clinic provides the medical services for the Board. All suspects of leprosy are examined here for official certification. In addition, temporary released patients, permanently or temporarily residing on Oahu, and relatives and children of any patient of this Board receive medical examination and treatment at this office. The dispensary is located at 264 North Kukui Street and is administered by the government leprologist. The suspect of leprosy receives his first contact with the Board of Hospitals and Settlement at this office where the disease is diagnosed and the new case of leprosy is officially certified. Approximately 2,500 individuals annually come under the surveillance of the Board's physician.

Kalihi Hospital

The law allows the new leprous patient five days after certification within which to close his business affairs before he must enter the hospital for treatment. Kalihi Hospital serves primarily as a receiving and treatment center, and regular medical attendance is provided. Kalihi Hospital has a capacity of caring for slightly

over 100 patients, and when the census approaches this limit transfers to Kalaupapa Settlement become necessary. Those patients beyond the age of 16 years who have resided at Kalihi Hospital in excess of six months are given first preference in making the transfer.

Kalaupapa Settlement

This settlement on the island of Molokai is located in an ideal spot for the care of persons afflicted with leprosy. The geographical situation of this peninsula of 8,000 acres banked by steep mountains affords privacy for this little village of 400 people who live as normal a community life as they would on the "outside." Certainly they are spared the gazes of the curious and the ostracism of their more fortunate fellowmen. In this community they may live in private homes or in rooms and apartments of "group" homes. They retain their franchise of voting. They are free to operate businesses of their own choosing or they may secure employment with the Board of Hospitals. The settlement is divided into a residential center of private homes and group homes; a hospital center with a 60-bed hospital that offers medical, surgical and dispensary services of all types; an industrial center which consists of a department store from which patients may make purchases on a ration basis, a laundry, an ice house for cold storage of perishables, a meat market, a poi shop, a warehouse, a post office, and an administrative office; a community house where current motion pictures are shown and where other forms of recreation may be provided. Scattered throughout the settlement are the many churches of all denominations with priests and ministers in regular attendance. At present there are two resident physicians and a lay superintendent.

Public education regarding leprosy is desirable and necessary. Probably the best method would be through a health museum as a part of a general program of health education. The cooperation of the medical profession in such an undertaking should result in a program of great and lasting benefit to the islands. Regular means of public education, such as radio talks and news articles, should not be neglected. Emphasis should be placed on the following points:

1. Children are more susceptible to the disease than adults and should be protected from possible contagion at all costs.

2. No shame or stigma should be attached to patients or their families.

3. Many persons do recover (perhaps with permanent scars) and when released may be received in the community without fear.

4. Kalaupapa Settlement is a pleasant community in which life goes on much as in other places.

5. No publicity should be released which has not been carefully checked by authorities on this subject. Misinformation is worse than none at all and it surely has had its day in connection with leprosy.

The development of effective treatment for leprosy, namely, the sulfone drugs Promin and Diasone, which has occurred within the past five years, seems likely to change our attitude toward the management of the disease in certain respects. It is already apparent that the treatment is so effective that the importance of early diagnosis is many times more important than it used to be. This means that education of the public and physicians in the early identification of the disease is of real practical importance, instead of -- as formerly -- merely desirable in a general and theoretic way. It does not appear as yet that the treatment we now have is effective enough to accelerate materially the rate of actual cure; indeed, by prolonging the lives of patients, it probably at least neutralizes the rate at which the total number of cases is decreased by either death or discharge. However, as more effective treatments become available, as they undoubtedly will, the cure rate will be an added and important factor in reducing the total census of patients.

Recommendations of

SUBCOMMITTEE ON TUBERCULOSIS CONTROL

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OUTLINE OF SUGGESTED RECOMMENDATIONS

Subcommittee on
Tuberculosis Control
of the
Committee on Communicable Diseases
Postwar Planning Committees for Health

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
I. <u>Legal</u> <u>Status</u> A. Territorial Statutes 1. General Chap. 42, R.L.H. 1945, Sec. 2301, reporting by physicians; Sec. 2302, reporting by other than physicians; Sec. 2303, safeguarding identity of persons reported; Sec. 2304, infectious and communicable diseases specified; Sec. 2307, removal and quarantine; Sec. 2308, quarantine without removal; police assistance; other persons removed; Sec. 2309, master of vessel liable for expense.	It is recommended that:	It is recommended that: Study be made of existing laws and regulations here and elsewhere and revision made in accordance with best available pattern.
2. Tuberculosis Control Chap. 42, R.L.H. 1945, Sec. 2316 and 2318, cuspidors; Sec. 2317, spitting prohibited; Sec. 2319, common drinking cups		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	It is recommended that:
prohibited; Sec. 2320, notices re: prohibitions on spitting, etc. to be posted; Sec. 2321, teachers having tuberculosis prohibited from teaching in public schools; Sec. 2322, reports by physicians and others; reports by name, age, sex, nationality, occupation, etc.; Sec. 2323, sputum examinations; Sec. 2324, protection of record, penalty; Sec. 2325-2326, disinfection; Sec. 2327, prohibition of carelessness by infected persons, penalty; Sec. 2328-2329, precautions, instructions to physicians; reports of such by physicians; Sec. 2330, reporting recovery of patient.	Effective methods be devised by responsible agencies for control of dangerously infective recalcitrant patients.	
3. Appropriations for Financing Hospitals Session Laws, 1945, Act 272, Part F (p.382), making appropriations from general revenues for support of quasi-public institutions.		

Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Suggestions and Recommendations for Long-range Objectives or Action
B. Rules and Regulations, Territorial Board of Health	It is recommended that:	
1. Chap. 3A; Sec. 7 (IR), tuberculin testing of cattle.		
2. Chap. I; Sec. 46 (par. 2), examination of food handlers.		
3. Chap. V; Sec. 157, 160, 162; defining contagious disease; reporting of disease by hospitals; prevention and control of communicable diseases.		
II. <u>Agency Programs</u>		
A. Territorial Board of Health		
1. Tuberculosis Advisory Committee Appointed by President of the Board of Health; consisting of representatives of the medical society, tuberculosis association, and U. S. Public Health Service.		
2. Personnel Director Survey Physician	The Territorial Board of Health provide the services of a qualified medical epidemiologist and adequate statistical staff	

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	It is recommended that:
Clinic Physician Public Health Nursing Consultant Public Health Nurses (2 at clinic) X-ray technicians (3) Technical Helpers (3) Nurse's Aide (1 at clinic) Statistician (half-time) Office Personnel (14½)	to the Bureau of Tuberculosis Control.	
3. Program a. Case finding through: mass survey; referrals from private physicians; chest clinic; contact follow-up; tuberculin testing program; Selective Service, and other sources.	All admissions to general hospitals, and all groups in which a high incidence occurs (such as prenatal patients) be routinely x-rayed.	The tuberculosis control program be expanded ultimately to include the mass x-ray survey of all persons over 15 years of age residing in the Territory of Hawaii; and machinery established for resurveying the population at definite intervals.
b. Follow-up: Home visits by public health nurses; through chest clinic; by cooperation of physicians in private practice; Selective Service referrals.	A medical social service program be developed in connection with the Honolulu Chest Clinic; this service to be coordinated with the social service department of Leahi Hospital.	
c. Education: 1) Professional groups--nurses - public	Emphasis be placed on educating physicians in private practice with regard to the value of chest x-rays and to	

Present Situation (Services and Resources	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	
health, student nurses, etc.; talks, courses, lectures by Bureau staff and Leahi Hospital	the availability of consultation services through the Honolulu Chest Clinic.	
2) Lay: In cooperation with the Territorial Tuberculosis Assn. and the Division of Public Health Education, Territorial Board of Health.	The health education programs of the Territorial Board of Health and Territorial Tuberculosis Association be expanded.	
d. Statistical Analysis: tuberculosis registry, mass survey, clinics and sanatoria.		
4. Services and Facilities a. Clinics: 1) Honolulu Chest Clinic, Lanakila Health Center	Consideration be given to establishing a pneumothorax clinic at the Honolulu Chest Clinic.	
2) Plantation hospitals: Clinic facilities available for Bureau staff		
3) Sanatoria: similar cooperative arrangements on other islands		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
4) Mobile unit: 4 x 5 miniature film equipment; mass survey program in industry, school-age and other large groups.		
b. Laboratory Facilities Board of Health laboratories utilized for diagnostic tests.		
c. Consultation and other Services: To physicians in private practice, plantation physicians and sanatoria by medical staff of Bureau. Assistance to physicians in arranging for hospitalization of tuberculous patients.		
B. Department of Public Instruction		
1. Program		
a. Teach children in sanatoria		
b. Supervise and cooperate with Territorial Board of Health and Tuberculosis Association in		

Present Situation (Service and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
tuberculin testing and X-ray programs. c. Tuberculin testing of all 7th and 10th grade pupils; all positive reactors X-rayed; also all 12th grade students and one complete high school every year. Instructors prepare students by conducting a teaching unit on tuberculosis. d. Require X-ray examination of all teachers every 3 years.	It is recommended that:	It is recommended that:
C. Department of Public Welfare 1. Pay to families of indigent patients grants for food, shelter, water, fuel and light, household and personal incidentals, clothing, transportation, church and societies, education, insurance recreation, debts and other items. 2. No definite policy on cases judged to be medically indigent. 3. Temporary tuberculosis hospitals presently reimbursed at the rate of $5.00 per day for the care of indigent persons.	Public Welfare regulations be modified and provision made for necessary funds for the adequate relief of tuberculous individuals and their families.	

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
III. Voluntary Agencies A. Territorial Tuberculosis Assn. (Oahu) 1. Personnel (17 full time employees plus 2-6 part-time typists from June through Seal Sale) Executive Secretary Asst. Exec. Secretary Health Education Supervisor Health Educator Office Manager Secretary Clerk-Stenographer Movie technician (part-time) Director of Rehabilitation* Asst. Director of Rehabilitation* Secretary* Nurse Educator* Nutritionists (3)** Workshop manager Workshop instructor		

* Assigned to Leahi Hospital Staff

**Assigned to Board of Health (one each on Oahu, Kauai, and Hawaii)

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	It is recommended that:
2. Program a. Case finding Assistance to Board of Health through purchase of X-rays, employment of personnel, etc.		
b. Education Community group work; utilization of visual media-radio; press, printed educational materials, talks, film showings, etc.		
c. Rehabilitation Kaimuki Sheltered Workshop. Inclusive rehabilitation program for referred patients.	A plan be evolved under sponsorship of the Territorial Tuberculosis Association for the establishment of a rehabilitation program centralized at the Honolulu Chest Clinic, for such tuberculous patients as are not included under the rehabilitation program at Leahi Hospital.	
d. Other Activities 1) Employment of personnel assigned to Territorial Board of Health and other agencies for expansion of nutrition, nursing, X-ray and rehabilitation services. 2) Scholarships 3) Financial assistance to agencies in		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	It is recommended that:
producing educational films 4) Provision of funds for research in tuberculosis		
C. Leahi Hospital 1. General Though private in nature, it is supported by the Territorial legislature. Serves as the public tuberculosis hospital for the island of Oahu. Hospitalization furnished without charge to residents of the Territory unless the individual is able and willing to contribute toward the cost of hospitalization. 209 persons awaiting hospitalization (some 60 bedridden patients temporarily hospitalized in Wahiawa General Hospital).	Permanent modern type buildings be constructed to augment and eventually to replace obsolete non-fireproof pavilions to a total hospital capacity of approximately 900 patients. Leahi Hospital maintain an adequate number of beds for the hospitalization of tuberculous persons and facilities be modernized to provide most up-to-date treatment.	

Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Long-range Objectives or Action
	It is recommended that:	
2. Personnel Administrative and Clerical Staff (23) Medical Staff (6½) Nursing Staff: Director Supervisors (14) Registered Nurses (11) Practical Nurses/ Nurses' Aides (31) Technicians (5) Pharmacist Director of Occupational Therapy Registered Therapist Director of Social Services Medical Social Workers (2) Dietitians (3) Kitchen Staff (38) Laundry (14) Maintenance and Repair Staff (31) Motor Services (2½) Orderlies (18) Others (40)	Additional personnel for works under construction and to fill existing vacancies for the biennium 1947-1949 should include: 4 administrative; 7 medical; 2 assistant directors of nursing staff, 33 Registered Nurses, 19 practical nurses/nurses' aides; 2 technicians; 2 registered therapists; 2 medical social workers; 2 dietitians; 25 kitchen staff; 6 laundry helpers; 7 maintenance and repair staff; 1/2 for motor services; 13 orderlies; 8 for miscellaneous services.	

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
3. Program a. Offers complete medical and surgical treatment for island of Oahu and surgical treatment for cases from two other counties (Hawaii and Kauai).	It is recommended that:	
b. Resident staff activities augmented by a consulting staff embracing all medical specialties. 1) A.M.A. accredited residencies for training in tuberculosis.		
c. Conducts nurse-education activities for affiliated nurses' training schools.		
d. Meticulous follow-up supervision and care provided for a limited number of discharged patients through outpatient department be-	Public health nursing assistance be provided in clinic and in the field, as liaison between hospital and Board of Health.	

Present Situation (Services and Resources)	Suggestions and Recommendations for: Immediate Action	Suggestions and Recommendations for: Long-range Objectives or Action
cause of limited facilities and personnel.	It is recommended that:	
e. Rehabilitation and nurse education program financed by Territorial Tuberculosis Association.	A two to four months' educational program in tuberculosis nursing be offered to all registered nurses in the Territory.	
	The hospital cooperate with the Department of Public Instruction and Nurses' associations in developing a central school for training practical nurses.	
4. Facilities Number of beds - 640 (Note: Two semi-permanent wards now under construction and to be occupied before the end of 1947 will provide 240 more beds.) Buildings - 40 <u>Main building</u> houses inadequately the administrative offices, medical records, surgery, X-ray, pharmacy, autopsy laboratory, treatment rooms; and 175 beds for infirmary patients.	Main building be enlarged to provide additional administration, clinical, surgical, and medical facilities to meet present needs.	

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
	It is recommended that:	
Wooden ward pavilions (15)* largely obsolete	Wooden ward pavilions be replaced by modern fireproof construction.	
Occupational therapy workshop (Plans drawn and funds appropriated by 1945 legislature for a modern building to provide kitchen, cafeteria, occupational therapy, rehabilitation, education, library, and recreation hall, which is now under construction.)		
Cottages (4): Rest room for female employees. School for children. Residence of superintendent of nurses. School for nurses.		
Recreation hall		
Nurse dormitories (3)	Additional nurse dormitory facilities be constructed	
Dormitories for male employees (5).		
Physicians' residences (4) (3 additional under construction)		
Laundry		
Boiler house	A new power plant be constructed and present structure converted into maintenance shops	

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* 1 obsolete wooden building for outpatients, social service, education departments and patients' library.

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
Waimano Temporary Annex* for domiciliary care of ambulatory patients to be abandoned when proposed modern facilities at Leahi Hospital are completed. The barracks are poor substitute for proper hospitalization. 2 Barracks, double deck; 84 rooms each; bed capacity, 336. 1 Dormitory (3-story); 96 rooms; will be utilized to house administrative offices, treatment center, X-ray, and staff quarters. 1 Recreation Hall, used for occupational therapy and recreation activities. 1 Assembly Hall 1 Kitchen and dining hall 4 Quonset Huts--used for storage and maintenance shops.		

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* Temporary structures; civilian barracks at Pearl City leased from U. S. Navy to relieve acute bed shortage.

TUBERCULOSIS CONTROL 1/

INTRODUCTION

The huge mass of literature devoted to tuberculosis in all its phases bears witness to the immensity and complexity of this problem. Several reports on various aspects of this subject have been made in Hawaii during recent years. The most thorough of these was the Douglas report 2/ made in 1938. Fundamentally, the basic principles for control as laid down by Robert Koch are as true today as they were in his time. Consequently, many of the control procedures outlined by Dr. Douglas still hold true today because his recommendations adhered to these principles.

Tuberculosis is a complex disease and its control poses enormous difficulties that extend far beyond the strictly medical into the farthest recess of our whole socio-economic structure. Its chronicity is such that all things which affect man also influence his tuberculosis. Oversimplification and dogmatic statements are easily betrayed by the exquisite complexity of this disease. The main problem is posed by the infinite number of variables. Some of these must be briefly mentioned in order to present what follows in its proper perspective.

The main numbers used in epidemiologic discussions of the diseases are the mortality, morbidity and infection rates, with the yearly attack rate sometimes added. The study of these gross figures alone or together leads to very little true knowledge. The current mortality rate is 55 and may have been as much as 200 twenty years ago.

Does this mean that it will be zero in another decade? What has been the effect on mortality of such things as more accurate diagnosis, hospitalization of

1/ The narrative phase of this study is a combination of a reports prepared by R. N. Perlstein, M.D., Associate Medical Director, Leahi Hospital; and members of the Subcommittee on Tuberculosis Control, Postwar Planning Committees on Health, Chamber of Commerce of Honolulu.

2/ Douglas, Bruce H., M.D., "Tuberculosis in the Territory of Hawaii," Chamber of Commerce of Honolulu, 1938.

cases, aging of the population, slum conditions, immigration, emigration? Does the tuberculous patient take more time to die in 1947 than in 1920? How many of the deaths are new infections and how many are reactivated cases? How many people are listed as having died of tuberculosis whose true cause of death was heart failure, suicide by voluntary starvation, or undiagnosed brain tumor? Conversely, how many persons are listed as having died of influenza and pneumonia who actually died of tuberculosis? The proportion of children 5 to 15 years of age in this community has been rising steadily in the last twenty years because of virtual eradication of the most common diseases of childhood. Since this age group contributes imperceptibly to the general tuberculosis mortality, what effect has it had on the mortality rate? Many more questions of this type can be levelled at the significance and reliability of morbidity infection and attack rates. The literature has been concerned for many years with answers to these questions and only by reading and digesting this material can one attempt to thread his way through the maze of complexities. We can best assess our local needs by listening to the opinions of those most experienced with tuberculosis and best acquainted with its literature. In this instance a vested interest is to be desired rather than deprecated. Nobody ever entrusts a burning house to anyone else than a fireman whose job it is to put out fires.

To the men concerned with tuberculosis we appear to be entering a new era. In many parts of the country the aim has been changed from control measures to eradication. The technique of mass x-raying by miniature fluorography has been largely responsible for this. Accelerated and perfected under the impact of war, this has provided us with a mass of information hitherto unobtainable. Unfortunately, this factual and epidemiological material, too, can be easily misunderstood and misinterpreted. In the following pages, the whole matter of the eradication of tuberculosis in this island community will be discussed. It will be considered under the following headings: education, case finding by mass fluorographic methods, voluntary hospitalization of all active cases, compulsory hospitalization of all recalcitrant active cases to be released only when activity has ceased, follow-up care, and rehabilitation.

EDUCATION

Intensive and sustained educational programs should be focused on the public, hospitals, and professional groups, including practicing physicians, nurses and auxiliary health workers.

Emphasis in lay education should stress the economic and social implications associated with the disease, its cause, mode of transmission, preventive measures, role of the x-ray in case finding, importance of early diagnosis and treatment, and the necessity for adequate treatment facilities. The Board of Health and the Territorial Tuberculosis Association are carrying out important work in the field of general education, but a great deal more remains to be accomplished in order to stimulate "the man in the street" to support measures designed for control of this disease. The best and most direct means of attacking this disease is preventing the spread of the causative organism.

Periodic clinics and conferences should be conducted under the auspices of leaders in the field, also through the Territorial Board of Health, to keep professional personnel abreast of new developments.

CASE FINDING

The use of mass miniature x-ray has been found to be vastly superior to all pre-existing methods of case finding. It is now being used rather extensively in the territory at present; but its application should be broadened to include all persons over 15 years of age, and the necessary machinery established to carry out repeat x-rays at intervals.

It has already been suggested that this technique has been much misunderstood and misinterpreted. Confusion has arisen from a lack of appreciation of the limitations of all x-ray diagnostic methods. An x-ray picture has only the remotest degree of finality. It is merely a complex of structures of varying degrees of opacity. Therefore, the technique will be described so that it may be understood more clearly.

A skilled team processes large numbers of people who form a segment of the community. File cards are made with appropriate identification data on them. When the small

films are read by skilled chest specialists, a number are recognized as having abnormal findings. These are set aside, rechecked, and the abnormalities confirmed by obtaining large standard-sized films. They may now be classified so as to segregate only those shadows thought to be characteristic of tuberculosis. These are then grouped as tuberculosis suspects. The listing of them as a percentage has resulted in great confusion because the suspects include cases of newly discovered tuberculosis, both active and inactive; previously known tuberculosis, active and inactive; new tuberculosis conditions of various types, and artefacts.

Two important steps then follow, each patient being processed in order to answer the questions: (a) Is this tuberculosis? and (b) Is it active tuberculosis? Both of the questions may be answered with comparative ease and little loss of time in the moderately advanced and far advanced x-ray involvement. However, in the case of minimal disease, the facilities of a busy clinic are sometimes--in fact, frequently--inadequate to cope with these questions.

Only long and patient study, using repeated x-ray films, temperature curves, and sputum studies using cultures and guinea pig inoculations can lead to the final resolution in certain cases.

In the attempts to discover the signs of life manifested by a very small organism buried in a large body, all the tricks of a skilled medical diagnostician frequently have to be used, and the end of a particular month or year will usually find some patients still in the limbo of uncertainty. To pounce on these as evidences of either incompetence, irresolution or disagreement on diagnostic standards would be most unfair. There is as wide a zone of agreement among all experienced tuberculosis men regarding what constitutes active tuberculosis as can be found in any field of medical diagnosis. Disagreement is usually settled by increased application of refined diagnostic methods and by the passage of time during which the majority of lesions disclose themselves as active or inactive.

A particular segment of the population, once surveyed, may not be considered as forever pure. The possibility of exposure will always exist for all the members of a community as long as a single active or inactive case is free among them. The probability exists with the number

of tubercule bacillus spreaders, their freedom of movement and the length of time they remain in the community. This can best be demonstrated in studies within families. In a study by Harmon and Douglas 1/, 2538 people were classified as having been exposed to one minimal case, one moderately advanced case, one far advanced case, two active cases, three active cases and four active cases. The percentage of infection as shown by a positive tuberculin reaction varied from 45.3 per cent of the contacts exposed to one minimal case to 100 per cent of those exposed to four active cases. The number of active cases discovered among these contacts varied directly with the extent of exposure. The time at risk is also important but much more difficult to evaluate in human material. Estimates of the yearly increment of new cases found in previously x-rayed populations vary from one to four per thousand. These are from studies on army and navy personnel whose age grouping does not correspond to that found in the average large community. All of this is cited only to show the necessity for continuous repetition of the mass x-ray survey as a case-finding method--one whose contribution to the eradication of tuberculosis is a long-range gain not to be overdramatized to the point of forgetting its short-term role of finding active cases.

Also, it is important to point out that the skilled statistical and epidemiological work necessary to the proper conduct of mass examinations of this type has been handicapped in the past by the lack of proper personnel at the Tuberculosis Bureau in the Board of Health. A trained tuberculosis epidemiologist augmented by an adequate staff is indispensable in order to make continuous studies on many unknown epidemiological problems associated with the disease throughout the territory, also to prepare and make available accurate statistical information. The invaluable lessons derived from these surveys cannot be properly presented or preserved without such assistance. Greater use of chest x-rays in their daily practice and increased utilization of the Tuberculosis Bureau facilities for consultation by practicing physicians is essential for more effective case finding. Likewise, general hospitals should routinely obtain chest x-rays on all patients admitted, especially among special groups such as prenatal patients.

1/ Harmon and Douglas, "Contact Cases," Am. Rev. Tuberculosis, Vol. 51, No. 1.

ISOLATION AND TREATMENT OF ACTIVE CASES

Finding a case of tuberculosis is but the first step in preventing spread of the disease. Little is accomplished unless it is segregated and adequately treated. The modern treatment of the disease necessitates a highly trained staff provided with the most up-to-date facilities and equipment with which to conduct an active program in collapse therapy and thoracic surgery. Extensive use of the mass x-ray is revealing significant numbers of hitherto unsuspected cases which serve as spreaders of the disease, or which at least are potential spreaders. Determination of the activity of chest lesions discovered in surveys requires refined diagnostic procedures which entail prolonged close observation. There are two possible ways to meet this problem. Personnel and laboratory facilities of the Bureau of Tuberculosis might be expanded so that a more refined and speedier diagnosis could be accomplished on a larger number of patients. Alternatively, these cases could be placed in a hospital under a special regime whereby a speedy determination of activity could be made, and those patients judged inactive could be discharged while those known to be active would be retained for treatment. The first plan introduces many difficulties, chief among which are the necessity for duplicating laboratory facilities already existing in sanatoria, the risk of spreading disease while awaiting diagnosis, and the difficulty of obtaining perfect cooperation with respect to supplying adequate specimens of sputum, submitting to gastric lavages, etc. An example of how important this may be is supplied by the experience of Leahi Hospital outpatient department. Here the patient has been in the sanatorium at least once and understands the importance of providing an honest specimen of sputum. Yet the rule has been that patients suspected of reactivation who submit sputum to the Leahi laboratory are seldom positive; but when these same patients are admitted to the hospital, the same laboratory obtains positives in more than 50 per cent of their number. For this and other reasons, it is strongly urged that all suspects be admitted to sanatoria for a short, intensive period of study during which a reasonably accurate assessment of activity can be made; and the facts about the disease, its potentialities, mode of spread and methods of control inculcated in the patient.

The older established criteria for determining the number of beds for tuberculosis in any community have been shown to be quite obsolete by the newer case-finding

methods. Consequently, there is no need here to reopen the controversy about the proper number of beds necessary since the fast-moving campaign to eradicate the disease cannot be accomplished without hospitalizing a high portion of all active cases in the community. The goal Leahi Hospital has set itself, namely, 600 permanent and 315 temporary beds, does not seem unreasonable. No person at the present time can predict with any certainty what type of population we may have a few years hence, nor what our tuberculosis problem may be. Given the present conditions of crowding, job uncertainty, housing inadequacy and high annual population increment, the estimate of 900 beds seems conservative.

The rapid growth and efficacy of the surgical treatment will also impose a burden on hospital beds available at Leahi, since this institution proposes to accept surgical cases from outside island sanatoria and has already carried a few to successful completion. In this connection it should be noted that the plant at Leahi is sorely in need of modernization, including the construction of a modern multi-story concrete building for adequate treatment of sick patients. Many of the present beds are in scattered obsolete wooden pavilion wards which will ultimately be demolished as the critical need for beds diminishes, leaving a total of 600 permanent beds in the buildings of first-class construction. Further funds have been appropriated to complete the contemplated development.

The setting up of a teaching unit for instruction of students and graduate nurses in modern techniques also emphasizes the importance of this hospital in the general scheme of tuberculosis control and eradication. Good permanent facilities are necessary for successful accomplishment of these objectives, all of which arise out of needs apparent from an experience of 40 years of treatment in this field.

COMPULSORY HOSPITALIZATION

The problem of the recalcitrant infectious patient who refuses hospitalization is dealt with inadequately at present. These individuals constitute a relatively small group but a highly important one from the standpoint of dissemination of the disease. This subject is reopened at this time because of its importance in any campaign looking toward complete elimination of tuberculosis in

the community. Under the concept of control, most communities have been content to have a number of infectious patients constantly spreading the disease to others. The fact that the mortality rate is now falling by very small increments in most countries is related to this laxity. Provision of hospital beds for isolation and treatment of such cases has been one of the most powerful factors in the mortality decline so far, and this must now be extended to include the groups of bacillus spreaders that remain in circulation. Banyai and Cadden 1/ state that these carriers are divided into three large groups: (1) Persons who in spite of having active tuberculosis do not realize they are sick and do not seek medical attention. This group will become smaller as mass fluorography reveals their illness to them. (2) Patients with active disease who refuse to enter an institution. (3) Patients with active open tuberculosis who leave the sanatoria against medical advice.

The last two groups can be coped with only on the basis of compulsion, and the authors quote the rules of their Wisconsin State Board of Health as revised November, 1941, which prescribe the quarantine of such patients in their homes until such time as they are willing to enter a hospital. The following states have passed similar Laws: California, Connecticut, Kansas, Michigan, Minnesota, New Jersey, New Hampshire, New York, North Carolina, Ohio and the District of Columbia.

This method will have to be coupled with tighter control of active patients in the hands of private physicians; but with ample hospital beds available and no waiting lists, this may not be as difficult to accomplish as it appears. The average active chronic patient is more of a burden to his private physician than otherwise, and a little persuasion may be needed to effect a temporary separation between the two.

Ferguson 2/, in a study of a rural Saskatchewan community with a low death rate of 20 per 100,000, found

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1/ Banyai and Cadden, "Compulsory Hospitalization of Open Cases of Tuberculosis." Am. Rev. Tuberculosis, Vol. 50, No. 2.

2/ Ferguson, R. G., "Recent Advances in the Campaign against Tuberculosis." Am. Rev. Tuberculosis, Vol. 50, No. 2.

that such unknown spreaders of all ages numbered 1 per 1,000 population. In his words, "Segregation of patients for treatment is the method proved to be most effective in the elimination of infection."

A survey made in Honolulu in June of 1945 1/ showed that "as of January, 1945, there were 667 individuals on the active register of the Division of Tuberculosis not in the sanatoria in the territory." This represents a large nidus which, if not reduced, would produce new cases indefinitely.

FOLLOW-UP CARE AND REHABILITATION

Major emphasis in this report has, for the most part, stressed measures designed to cope with the erogenous form of tuberculosis. This type is derived by contact with someone who has the disease in an active infectious stage. There is another form, endogenous reinfection, which is probably of equal importance. This type makes the disease tenacious and troublesome. Patients who have originally acquired the disease from an outside source are capable of reinfecting themselves from their own disease areas, these reinfections being continuous or intermittent in the same organ or in any or many other organs. If the patient is fortunate to maintain a high degree of resistance, these reinfections may cost him at most one or more readmissions to the hospital. If reactivation occurs when the patient's resistance is low it may cost him his life.

This form of reinoculation is responsible for most of the prolonged illness, family infection, instability both mental and physical, and lack of response to therapy which form the most discouraging features of the disease. It depends in the first instance on the massiveness of the original infection and on its early detection and prompt treatment. But more than anything else, it depends upon the careful and skilled supervision of the patient's after care, once a temporary truce with the invading organism has been established. The number of reactivated cases reported to the Territorial Board of Health each year is

1/ Coogan, Ruth A., "Study of Tuberculosis Requirements in the City of Honolulu." Public Health Committee, Chamber of Commerce of Honolulu. (Unpublished)

the measure of the success of this supervision. Twenty to 25 per cent of all new cases reported yearly are usually reactivated old ones.

The presence of an increasingly large number of former soldiers in the community who have been discharged from the army because of tuberculosis makes this problem more acute than ever. In order to prevent inactivation, these men must be supervised through a hardening carefully adjusted to cushion the transition from a hospital bed to full activity. Many will have to be retrained or re-educated and placed in new jobs. They will have to be warned to stay out of the sun, to guard against colds and loss of weight, and to refrain from the more strenuous forms of physical activity. They will have to rely very heavily on private physicians and those of the Board of Health for advice and frequent physical and x-ray checks. Consideration should be given to the establishment of a pneumothorax clinic at the Honolulu Chest Clinic for patients in this category.

Although an excellent after-care program is in existence at Leahi Hospital, with a rehabilitation expert in control of all phases of re-education, retraining and job placement, this system is unable to absorb any more patients. Some scheme must be worked out for veterans as well as for patients ordinarily cared for by Board of Health physicians and by private doctors. This should be modeled on that in existence at Leahi Hospital since the ten-year rehabilitation experience of this institution makes a valuable guide for any newly organized project.

The Territorial Tuberculosis Association, which has sponsored and financed Oahu's rehabilitation program and advised those of the islands of Hawaii and Maui, would be the logical agency to establish such a program for the Tuberculosis Division, centralized at the Honolulu Chest Clinic, which would then assume supervision of the veterans as well as all other patients not cared for by the Leahi Hospital outpatient department. Referrals for hardening periods could then be made to the sheltered workshop run by the Tuberculosis Association, and to the Vocational Rehabilitation Bureau of the Department of Education for re-education and retraining. This is a highly important phase of control work if patients are to be successfully rehabilitated after completion of treatment, also if recurrence of the disease is to be minimized.

It is recognized that the recommendations made for augmenting existing programs and development of new ones will entail the expenditure of considerable sums of money over a period of several years. However, it must also be kept in mind that tuberculosis is our greatest public health problem in the Territory. Therefore, the community can ill afford not to spend the money necessary for control and eradication of this scourge which ravages so many of our people.

SUMMARY

I. Case Finding

   A. Recommendations
      1. Expansion of mass fluorography on all Islands to cover all people 15 years of age and over.
      2. Increased Board of Health personnel and facilities necessary to accomplish this.
      3. Trained epidemiologist with an adequate statistical staff at the Division of Tuberculosis.
      4. Admission chest x-rays on all hospital patients.
      5. Routine chest x-ray on all prenatal patients and other special groups.

II. Hospitalization

   A. Hospital diagnostic study of all active and doubtful cases discovered by the Board of Health.

   B. Ample bed capacity of sanatoria eliminating waiting lists.

   C. Chest surgery at Leahi.

   D. Tuberculosis education for nurses at Leahi Hospital.

III. Compulsory hospitalization

   A. Enforcement of quarantine on all patients diagnosed as active until willing to enter hospital for treatment.

   - B. Establishment of detention ward at Leahi Hospital for recalcitrants and patients who leave the hospital against advice.

IV. After care and rehabilitation

   - A. Central rehabilitation scheme under Tuberculosis Association sponsorship.
   - B. Trained rehabilitation personnel at Lanakila Health Center to work under the supervision of the Territorial Board of Health.
   - C. Veterans' after care and rehabilitation at Lanakila.
   - D. Establishment of pneumothorax and pneumoperitoneum refill facilities at Lanakila.

TABLE I

INDUCTION ROENTGENOGRAPHY

Year	Writer	Place	Number X-Rayed	Tot.Reject. for Reinfect. Type T.B.(%)
1940	Jones	Canada	"Several thousands"	1.06
1940	Cooper (quoted by Long)	Australia	?	0.5
1941	Plunkett	Upstate New York	4,935 4,394 5,594	1.0 0.9 0.7
1941	Reynolds(quoted by Long)	Pennsylvania	?	1.83
1941	Edwards et al.	New York City	6,609 9,541 35,210 28,235 34,535	1.14 1.02 1.11 1.19 0.73
1941	Ashbury	Baltimore	11,870	1.2
1941	National Headquarters of the Select.Ser.Sys.	Sampling by States	19,923	1.4
1942	Richards	Canada	328,325	0.9
1942	Ashbury, et al.	Baltimore	6,230 15,924	1.2 1.3
1943	Levitin	San Francisco	10,000	1.2-1.35
1943	Penn	Tennessee	?	?

TABLE II

PRE-EMPLOYMENT ROENTGENOGRAPHY

Year	Writer	Place	Population Group	Number X-Rayed	Incidence of re-infection Type Tuberculosis (%)	
					Total	Clinically Significant
1932	Denker	Germany	Policemen *	1,369	0.4	?
1935-37	(quoted by Leigh)	France	Railway Employees *	25,000	1.2	?
1936-39	Edwards	New York City	Guides	1,917	2.5	1.0
			Teachers	3,185	2.6	1.0
			Firemen	5,279	1.3	0.8
			Health Dept.	1,306	4.7	1.1

* Passed as physically fit by clinical standards.

TABLE III

MASS ROENTGENOGRAPHY OF MISCELLANEOUS POPULATION GROUPS

Year	Writer	Place	Population Group	Number X-Rayed	Incidence of Reinfection type TB %			Extent of disease in clin. significant re-infect. type TB %		
					Total	Arrested	Clinically Significant	Minimal	Mod. Adv.	Far Adv.
1932	Denker (quoted by Leigh)	Germany	Students	"Thousands"	0.2 to 0.6	?	?	?	?	?
1936 to 1939		New York City	HS Stud.	16,362	0.4	0.05	0.35	71	24	5
			College	16,810	0.3	0.1	0.2	59	35	6
			N.Y.A.	8,708	2.0	1.1	0.9	65	24	11
			Fed. prisoners	1,023	3.7	2.7	1.0	90	0	10
			Relief Recipients	65,459	4.1	1.2	2.9	74	18	8
			Male prisoners	3,892	10.6	6.1	4.5	58	31	11
			Furriers	4,972	7.0	5.7	1.3	84	11	5
			Homeless males	4,716	16.0	10.7	5.3	42	41	17
1942	Pindell	Los Angeles	Indigents	2,107	2.3	1.7	0.6	77	23	0
1943	Bradford	Wash.,D.C.	Cens. Bur. employees	2,694	1.7	?	?	24*	62*	14*
1943	Office of TB, USPHS	11 States	77 War Ind.	125,190	1.3	?	1.3	54	43	3
		Wash.,D.C.	Govt. Empl.	28,098	1.1	?	?	61*	35*	4*
			Nat. Inst. Hlth. Empl.	1,300	1.1	?	?	60*	40*	0*

* Not specified whether arrested, clinically significant or both.

(Foregoing tables taken from American Review of Tuberculosis, Sept. 1944, Vol. 50, No. 3, pp 216-217)

TABLE IV

RECENT SPECIAL SURVEYS

Authors	Type of Patients	Yrs of Survey	Total Surveyed	Tuberculin Positive %	X-Ray Positive %	Active Clin. Sig. %	Inactive %
Ruskin	Mental Hosp	1937-43	1,852		17.5	7.2	10.3
Bass & Thompson	Japanese Americans	1945	2,771	45	3.69	.41	3.28
Swartout & Dierker	Food Handler	1942	1,634		6.00	.43	
Maeder & Meyers	Pregnant Women	1940	2,350	31.5	1.1		
Ianne	Pregnant Women	1939	691	41.0	1.8		
Seid	Pregnant Women	1940-42	1,000	38.0	1.4		
Harmon & Douglas	Contact Cases	1937-44	1,754	45.3 to 100.0		4.2	
Brooks	Seamen Royal Navy	1937-44	479,372		1.27		
Trail & Trenchard	Men & Women R.A.F.	1937-44	M190,076 F 59,951		M .77 F .94	M .28 F .36	M .49 F .58

TABLE V

DETERMINATION OF ACTIVITY

Authors	Type of Patients	Yrs. of Survey	Total Surveyed	Minimal %	Mod Adv %	Far Adv %	Total Active %	Non-T.B. %
Bunta	TB Rejectees	9/30/41 2/1/44	1,994				80.5	4.0
Brooks	Seamen, R.Nvy c Minimal TH	1944	2,911	100			32.0	
Zacks & Hyde	TB Rejectees	1942-44	2,270				43.0	3.0
Hudson & Brachman	Rejectees	1944	787	61 (Act.12%)	31 (Act.35%)	8 (Act.55%)	23.0	
Brooks	Rejectees R. Navy	1944	2,911	47.9			16.0	

Note: Of far advanced cases 91% were active.
Moderately advanced cases 70% were active.
Minimal cases 25% were active.

TABLE VI

SURVEY FINDINGS
Early Age Groups

	Total X-rayed	TB suspects on small xr	% Susp. (Activity unknown)	No. checked by large xr	Probably Act.		Probably Inactive	
					No.	%	No.	%
Selective Service (12/10/45)	17,655	76	0.43	76	34	0.19	42	0.21
School, Oahu (8/2/45)	6,432	32	0.5	30	4	0.06	26	0.4
Food Handlers & H. S. Students (8/8/45)	5,476	44	0.8	?	?		?	
School, Kauai	1,627	15	0.9	12	3	0.18	9	0.55
Total 25 years & Under	31,190	167	0.53	118	41	0.13	77	0.24

Miscellaneous & Later Age Groups

Selective Service (10/31/41)	4,658	99	2.1	?	?		?	
Industrial, Oahu 12/6/45)	14,218	308	2.16	222	74	0.52	148	1.03
Industrial, Kauai (8/13/45)	11,600	298	2.6	236	116	1.0	120	1.03
Food Handlers (1943-44)	10,000	537	5.37	381	80	0.8	301	3.0
Total Miscell. Age Groups	40,476	1242	3.06	839	270	0.66	569	1.15

TABLE VII

STAGES OF ACTIVE TUBERCULOSIS CASES

Schools and Selective Service (Ages 18 to 25)
Miscellaneous and Later Age Groups

	Total	Min		Mod Adv		Far Adv	
		No.	%	No.	%	No.	%
Schools and Selective Service	76	47	62.8	28	36.8	1	1.3
Miscellaneous and Later Age Groups	270	137	50.7	102	37.7	31	11.5

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Bruce H. Douglas, M.D. (Chamber of Commerce, Honolulu)

Recommendations of

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OUTLINE OF SUGGESTED RECOMMENDATIONS

Subcommittee on Venereal Diseases
of the
Committee on Communicable Diseases
Postwar Planning Committees for Health

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
I. Legal Status		
A. Control of venereal diseases vested in: 1. Territorial Board of Health 2. Physicians in private practice 3. Armed forces		
B. Supporting legislation: 1. Infectious and communicable diseases--Chap. 42: Sec. 2301-2304; 2307 (R.L. 1945) 2. Rules and Regulations of the Territorial Board of Health--Chap. 10 (Venereal Diseases); Chap. 5: Sec. 161, 162 (Prevention of Blindness in Newborn and Control of Communicable Diseases)		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
3. Prenatal Law--Chap. 42: Sec. 2310-2313; Act 105: Sec. 1 & 2 (R.L. 1945) 4. Premarital Law--Chap. 301: Sec. 12356.01; Act 136: Sec. 1 & 2 R.L. 1945) (Note: Laws adequate) II. Personnel: Adequate. III. Program	It is recommended that:	It is recommended that:
A. Education 1. Adult a. Professional groups--physicians and nurses. Done by professional staff of Territorial Board of Health and other physicians. Methods: Talks, films, slides, discussions at professional meetings and training schools - emphasis on diagnosis and treatment and control measures.	More emphasis be given to venereal disease education by the Bureau of Health Education, Territorial Board of Health.	If at any time a major subdivision of preventive medical services is set up within the administrative structure of the Territorial Board of Health, the venereal disease control program be included.

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
b. Lay groups--general public (women's organizations, civic clubs, and industrial groups) <u>Methods</u>: Talks, films, slides, other visual aids, press, printed educational matter, and radio.		
c. Armed forces <u>Methods</u>: Talks, films, other visual aids and printed educational matter.		
2. School Age Children		
a. Unit on venereal diseases prepared jointly by Territorial Board of Health and Department of Public Instruction; integrated with study of communicable diseases or general school health program in all public secondary schools (grades 9-12); used to limited extent in grades 6,7,8.		

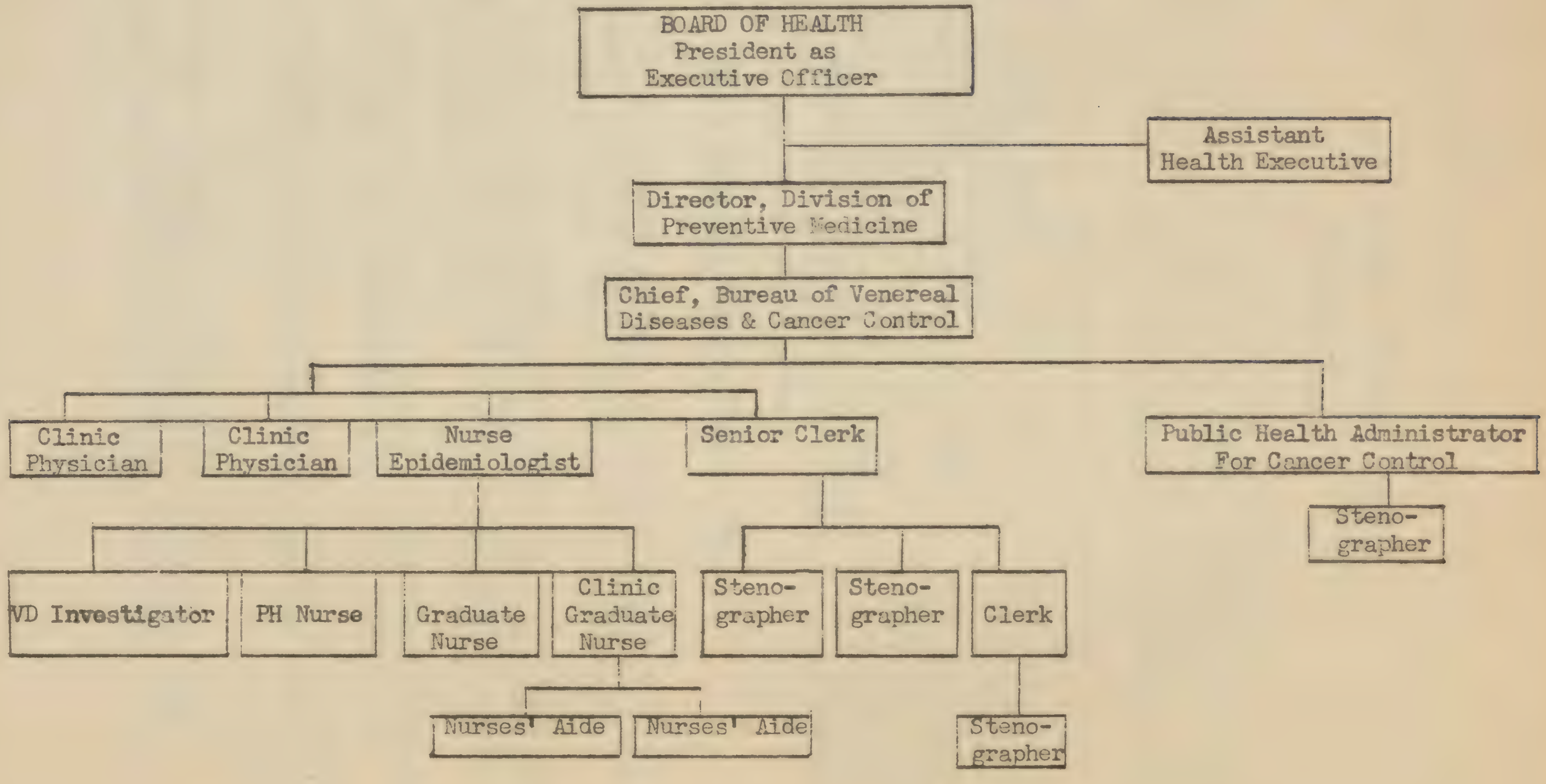
Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Suggestions and Recommendations for Long-range Objectives or Action
b. A number of private secondary schools, also, are participating in the venereal disease education program.	It is recommended that:	
B. <u>Epidemiology</u> 1. Contact investigation a. Civilian b. Armed forces 2. Other case finding	Physicians be encouraged to take blood tests routinely for physical examinations unless contra-indicated.	
a. Surveys 1) Mass blood testing in connection with mass x-ray. 2) Police department arrests. 3) Blood bank. b. Prenatal blood tests c. Premarital blood tests. 3. Case holding and follow-up. a. Physicians in private practice.)By public b. Clinics)health nurses	<u>All</u> hospitals require blood tests of new admissions.	
C. <u>Diagnostic facilities</u> 1. Territorial Board of Health laboratories in all counties.		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
2. Approved private laboratories for prenatal and premarital blood testing. (25 labs.)	It is recommended that:	
D. <u>Treatment facilities</u> 1. Clinics a. Honolulu 1) Outpatient service a) Queen's Hospital b) St.Francis Hospital 2) Kapahulu Health Center b. Rural Oahu: Government physicians c. Other islands 1) Hilo, Hawaii 2) Wailuku, Maui 3) Government physicians 2. Free drugs - distributed to physicians in private practice for treatment of venereal disease providing physicians submit morbidity reports, that there is adequate contact investigation and drugs are used in accordance with accepted treatment schemes.	Medical care programs in industry should include venereal disease control.	

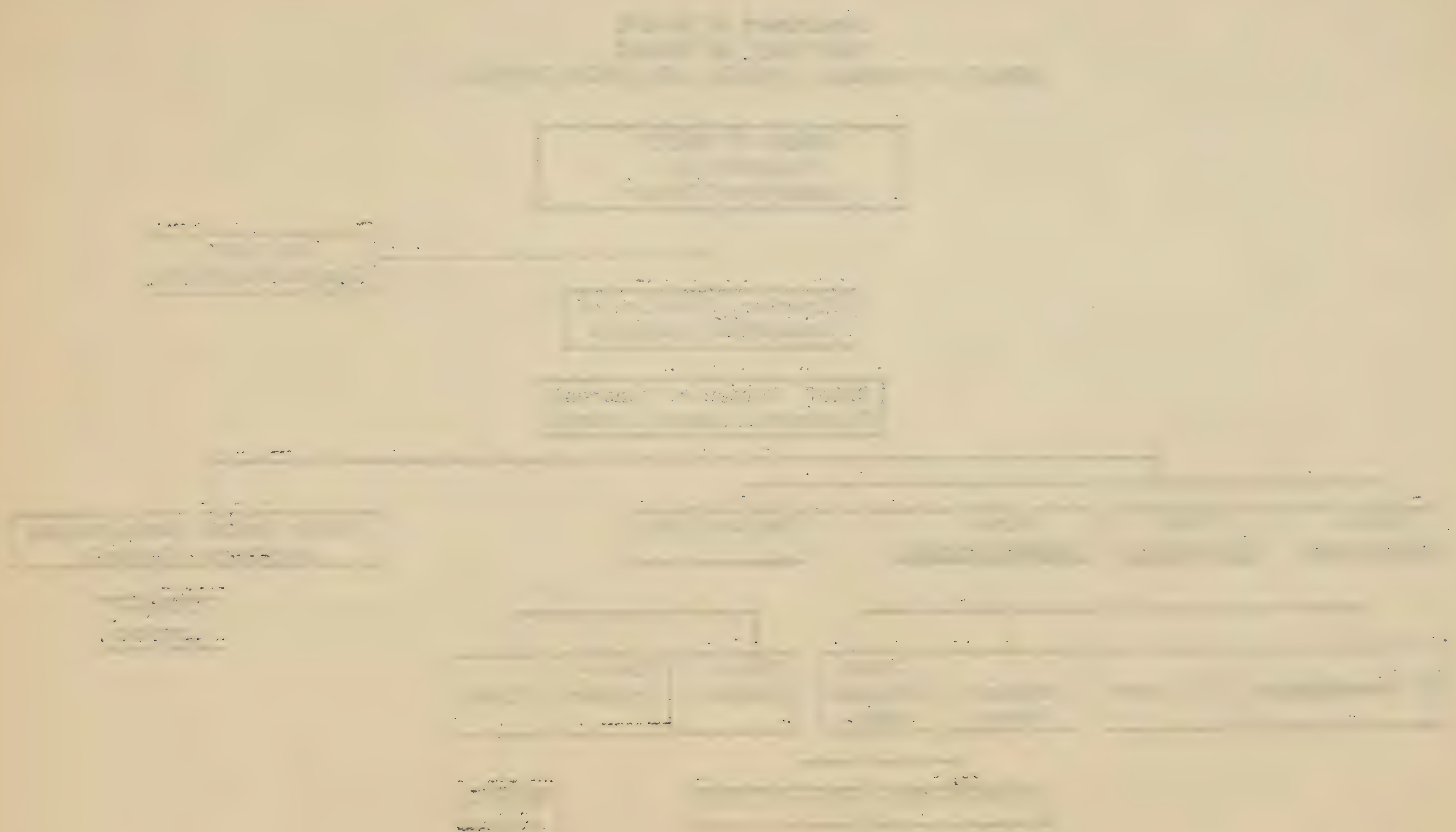
Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
Note: Standards set by committee including Venereal Disease Control Officer of Territorial Board of Health and 2 recognized syphilologists from the community.	It is recommended that:	
E. Venereal disease intelligence 1. Morbidity reports a. Physicians in private practice b. Clinics c. Armed forces 2. Progress reporting Central Tabulating Unit	The Board of Health intensify its efforts to encourage all physicians to report all cases of venereal disease and make reporting as simple as possible.	
F. Prophylaxis 1. Army and Navy prophylactic stations 2. Distribution to individuals a. Armed forces b. Retail	Prophylactic policies of the armed forces to be continued.	
IV. Cooperating Agencies:		
A. Official 1. Dept. of Public Instruction--educational program for school age children		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
2. Dept. of Public Welfare--recalcitrant and indigent cases		
3. Law enforcement--control of prostitution; maintenance of quarantine		
B. Voluntary		
1. Council of Social Agencies Child and Family Service--referrals for rehabilitation and other aid		
2. Hospitals		
3. Industrial health units		
V. Related Problems (considered in detail in the Social Hygiene report)		
1. Prostitution		
2. Delinquency		
3. Recreation		
4. Unmarried mothers		
5. Others		

Department of Health
Territory of Hawaii
BUREAU OF VENEREAL DISEASES AND CANCER CONTROL*



* Organization effective August 18, 1947



VENEREAL DISEASE

Introduction

A program directed toward the virtual elimination of venereal diseases in the community holds high priority in postwar planning for communicable disease control. The high national incidence of these diseases--syphilis and gonorrhea especially--and the serious individual and social consequences resulting from their existence, make a control program extremely important.

A venereal disease control program must be sufficiently comprehensive to cover all phases of a problem that is exceedingly complex. It is necessary to note in whom control of venereal diseases is currently vested, and what legislation supports venereal disease control. The adequacy of personnel assigned under present practice to venereal disease control must be checked. Facilities devoted to the more immediate needs of diagnosis and cure require attention, as well as facilities for epidemiological study, which is aimed at tracing the course and stopping the spread of venereal disease infection. Ultimate control is based, however, on adequate information by authorities, prophylaxis, and especially on a continuing educational program. All these aspects must be analyzed before a likely control program for the future can be proposed.

Legal Status of Venereal Disease Control

Control of the venereal diseases in Hawaii is vested in the Territorial Board of Health, in private physicians and in the armed forces, and is supported by a number of laws. These laws include the following:

(1) Territorial laws governing infectious and communicable diseases. In these, physicians and others are required to report certain such diseases (which are defined) to the board of health, the identity of patients is safeguarded, and provisions are made for removal and quarantine. 1/

(2) Territorial law requiring prenatal examinations. Confidential reports of serologic tests of expectant mothers are required. 2/

(3) Territorial premarital law. This law makes a premarital examination for syphilis prerequisite to obtaining a marriage license. 3/

1/ Chap. 42, Sec. 2301-2304, and 2307 (R.L. 1945)
2/ Chap. 42, Sec. 2310-2313; Act 105, Sec. 1 and 2 (R.L. 1945)
3/ Chap. 301, Sec. 12356.01; Act 136, Sec. 1 and 2 (R.L. 1945)

(4) Regulations of the Board of Health covering venereal diseases, prevention of blindness in infants and control of communicable diseases. 1/

These laws seem generally adequate.

Personnel

Control of the venereal diseases in the Territory of Hawaii is under the Bureau of Venereal Diseases and Cancer Control of the Territorial Department of Health. A clerical and professioanl staff of approximately 17 persons comprises this bureau. The accompanying organization chart shows the organization of the bureau and its relationship with the Board of Health.

It is felt that personnel is generally sufficient to cope with the problems of venereal disease control.

Preventing Venereal Disease

The old adage that "an ounce of prevention is worth a pound of cure" is doubly meaningful for the venereal diseases. The financial costs of adequate therapy are great enough, for institutions for the blind and insane (to name but a few) exist in large measure to serve the syphilitic, industry loses many of its workers for extended periods, and individuals find themselves deprived of their means of livelihood. The costs in terms of social disintegration and individual suffering are much greater.

A coordinated program attacking venereal diseases on many sides is necessary for the virtual elimination of the diseases in the community. With respect to preventive measures, such a program should embrace an educational program, encouragement of prophylaxis, and steps toward the proper assembly of pertinent data regarding venereal diseases in the local area.

Adult Education

Adult education, for example, can be advanced through professional groups, interested lay groups, and the armed forces.

The education of professional groups--usually physicians and nurses--can most appropriately be performed by the professional staff of the Territorial Board of Health, as well as by other physicians. At the present time, for example, the Health Department is engaged in some community education through such media as lectures, slides, films, radio programs, press releases, and other printed material and visual aids. By similar techniques

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1/ Rules and Regulations of the Territorial Board of Health, Chap. 10; Chap. 5, Sec. 161, 162.

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professional education is directed towards nursing and medical groups. Technical information is provided physicians by making available reprints and other source material. 1/ Refresher and specialized courses are given to public health nurses as part of their staff education program. Throughout, the emphasis is placed on diagnosis, treatment and control measures.

Adult lay groups offer excellent opportunities for the extension of the educational program. The general public as represented by women's organizations, civic clubs and industrial groups have been very active; they are not only responsive to acquiring authentic information, but assist materially in further disseminating it by sponsoring discussion meetings and radio programs, and making possible the utilization of printed educational materials and the presentation of visual aids.

Similar techniques have been employed by the armed forces in presenting venereal disease information to their members.

Education of School Age Children

The all-important venereal disease education of school age children has recently made considerable progress in the Hawaiian Islands. A program designed for secondary schools was undertaken jointly in 1944 by the Division of Health Education of the Department of Public Instruction and the Division of Venereal Diseases of the Board of Health. 2/ Materials suitable for teacher and student were developed for the local secondary schools and distributed to them. 3/ To a lesser degree, venereal disease instruction has been given in grades 6, 7 and 8. Private and parochial secondary schools have requested these materials for use in their own programs. The venereal disease study has usually been incorporated into courses making a general study of communicable diseases.

1/ S.D. Allison, M.D. and W. L. Zink, M.D., "Syphilis on Hawaii's Plantations," *Plantation Health*, July 1943, p. 12.

2/ For a detailed account of the development of the secondary schools program of the Territory of Hawaii, the reader is referred to the following sources:

Johnson, June, *Building a Venereal Disease Education Program* (June 1945)

Johnson, June, "An Answer to a Challenge," *Journal of Social Hygiene*, 30:9, December 1944.

Johnson, June, "Territory-wide School Program on Venereal Disease," *The Clearing House*, 20:1, September 1945.

Allison, Samuel D., M.D., and June Johnson, "V.D. is Being Taught in Hawaii's Schools," *Journal of Health and Physical Education*, March 1946.

3/ These materials include one book, *V. D. Manual for Teachers*, by Samuel D. Allison, M.D., and June Johnson (New York: Emerson Books, Inc., 1946) and two pamphlets, "V. D. Information for High School Students," and "Story of V. D." (for intermediate school pupils), both prepared by June Johnson.

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Prophylaxis

A more direct means of preventing venereal disease is through the proper use of prophylaxis.

At the present time, prophylaxis stations are in operation. These stations are run by the Army and Navy, but are made available for civilian use. The practical wisdom of continuing the operation of such stations is generally recognized. Since most people utilizing these stations are service personnel, it is probably better that the stations continue to be operated by the armed forces.

Venereal Disease Intelligence

Any program aimed at the virtual elimination of venereal diseases in the Territory must be grounded in and guided by complete, accurate data regarding the local incidence of venereal disease. Only when fully informed on these matters can authorities promptly adapt control measures to the complex local venereal disease picture.

At the present time a reasonably adequate body of information exists concerning the prevalence of the venereal diseases in Hawaii. Much of the information regarding syphilis has come from large-scale surveys. Fairly accurate information is available on the incidence of gonorrhea, particularly as a result of close cooperation by the clinics and armed service. With the distribution of penicillin and the development of a case-holding program for private physicians, improved reporting by such physicians has been encouraged.

A few improvements still might be made. All venereal disease cases and contacts should be reported to the Health Department, a practice that could well be encouraged by the Medical Society. These reporting procedures could well be simplified to include only the minimum essential information. A subcommittee of physicians might work with the Bureau of Venereal Disease and Cancer of the Board of Health to develop such a simplification. Progress on venereal disease cases should continue to be reported to the Central Tabulating Unit of the United States Public Health Service.

Finding and Tracing Venereal Disease

Careful case-finding is also requisite to a venereal disease control program. Although such preventive measures as V. D. education and prophylaxis will greatly reduce the incidence of the venereal diseases, it can hardly be expected that these diseases will thereby be eliminated. Persons infected with syphilis or gonorrhea will still be at large in the community, and these persons will tend, as always, to infect still others. It is the function of the epidemiologist to trace the ever-expanding number of contacts made by an infected person, to go backward to the source and forward to the most recent-

ly exposed persons. Only after such case-finding can a break be made in the chain of infection and proper treatment be instituted.

At the present time the Board of Health is investigating all sources or contacts of venereal disease patients, stressing that these be sought out, examined and treated if necessary. This policy has been extended to include all syphilis and not merely infectious syphilis, for late or latent syphilis, if untreated, often results in serious consequences. The present epidemiological services of the Board of Health are as follows: 1/

(1) Investigation of all civilian contacts of military and merchant marine personnel. 2/

(2) Investigating contacts of private physicians' cases of gonorrhea.

(3) Investigating contacts of private physicians' cases of early syphilis, and of family contacts of other syphilis among clinic patients.

(4) Follow-up of delinquent cases of syphilis. (At present about 2/3 of the service of this type is for cases of private physicians.) 3/

At the present time the follow-up of private physician and clinic cases of late and latent syphilis is considered adequate. Sufficient funds must be provided, however, so that personnel can be maintained to carry out the above tasks effectively in the future.

Some infected persons may not be caught by these case-finding methods. Some syphilitics may not have had contacts for a considerable period of time. In addition, there are many cases in the community who are probably non-contagious but who may become community problems because of the serious late manifestations of the venereal diseases.

Other methods are necessary to discover these infected persons. In order to find and place these cases under treatment, it is necessary to augment routine blood testing procedures and make extensive serologic surveys.

1/ Semi-annual reports to the U. S. Public Health Service. Navy Venereal Disease Contact Investigation - 3d quarter, 1944, Report No. 1. U. S. Public Health Service - V.D. Division Monthly Statistical Letter, April 1945.

2/ Col. E. Colby, M.C. and S.D. Allison, M.D., V. D. in War-time Hawaii.

3/ S.D. Allison, M.D. and H. Kuwamoto, P.H.N., "Follow-up Service for Private Physician Cases of Venereal Disease in Hawaii," to be published in the American Journal of Syphilis.

In part this may be accomplished by encouraging physicians and hospitals to take blood tests as a routine part of all physical examinations and hospital admissions. Advisable also is the continuance of this procedure with regard to Police Department arrests and Blood Bank donations. A routine blood-testing program for industry should be developed with the purpose in mind of finding and treating venereal diseases among employees without jeopardizing the job of the non-hazardous syphilitic. The hazardous syphilitic should be transferred to a position or task where he will not endager anyone. The essential elements of such a control program in industry would be, first, pre-job testing of prospective employees, and second, an adequate follow-up program of contacts.

Curing Venereal Diseases

It is now necessary to diagnose and cure the exposed persons ferreted out by the epidemiologist. Either public or private facilities can be utilized for these steps.

There are a number of diagnostic laboratories in the Territory. The Board of Health provides laboratory services for the diagnosis of venereal diseases on the same basis that it provides for the other communicable diseases. There are 25 approved private laboratories in the Territory for prenatal and premarital blood testing.[1] Here tests are largely serologic tests for syphilis and smear and culture examinations for gonorrhea.[2]

Private and industrial physicians should be encouraged to make maximum use of the Board of Health diagnostic facilities. They are extremely important to the overall venereal disease control program, and encourage better medical care at less expense to the patient than could otherwise be provided.

Recent advances in the treatment of the venereal diseases have necessi-

[1] B. Witlin, Sc.D., "Evaluation of Laboratories Approved to Conduct Prenatal Serologic Tests for Syphilis," Hawaii Medical Journal, September - October 1944, p. 31.

[2] S.D. Allison, M.D.; W.L. Zink, M.D.; and W.S. Ito, M.D., "Serial examinations in the Epidemiology of Genococcal Infections," Venereal Disease Information, Vol. 25, January 1944.

S.D. Allison, M.D. and B. Witlin, Sc.D., "Bartholin Glands as a Source of Gonorrheal Infection," The Urologic & Cutaneous Review, Vol. XLIX, No. 7, pp. 424-425.

tated reconsideration of the whole matter of clinical and hospital facilities. At present, for example, several days' hospitalization are required for treatment of venereal diseases by penicillin.

Local treatment facilities currently include clinics, government physicians and free drugs. The Kapahulu Health Center, operated by the Bureau of Cancer and Venereal Disease of the Board of Health on the waikiki side of Honolulu, is the major venereal disease diagnostic center in the area. Spinal tests are done on all positive cases found in surveys and sterile spinal fluid examination kits are made available to private physicians. No fees are charged at this clinic. (Health departments receiving Federal funds must provide for the emergency diagnosis and treatment of all patients who apply, the treatment of patients referred from private physicians for consultation and continued care, and for the treatment of people unable to pay for medical service.)

Treatment facilities are also available in the Territory outside of metropolitan Honolulu. In rural Oahu, adequate treatment is provided by government physicians at the Kaneohe Health Center, Kailua and at Wahiawa. There are clinics operated by plantation physicians who are also government physicians at Aiea, Ewa, Kahuku, Waialua and Waipahu. On the other islands, there are treatment centers in Hilo, Hawaii and Wailuku, Maui, where clinic physicians are in attendance.

At the present time arsenic and bismuth preparations are provided for the treatment of syphilis, and penicillin for the treatment of gonorrhea, without regard to the economic status of the patient. This policy should be continued. The above anti-venereal drugs should be provided to physicians for the treatment of all patients regardless of the patients' economic status, providing that morbidity reports be submitted to the Board of Health, that contact investigation of the patient be considered adequate by the Board of Health, and providing that drugs be used in accordance with generally accepted treatment schemes. As penicillin becomes more readily available and less expensive, it should be provided for the treatment of all types of syphilis for which it has been proved effective; this determination should be made by a committee consisting of the venereal disease control officer of the Board of Health and at least two recognized syphilologists of the community.

Cooperating Agencies

The venereal disease control program has been very fortunate in having numerous cooperating agencies to aid in the work. These include both official and voluntary groups.

Among the official agencies cooperating in the program are the Department of Public Instruction, which has aided in the development and is carrying on an educational program for school-age children; the Department

of Public Welfare for hospitalization of recalcitrant and indigent cases; the law enforcement agencies which are responsible for the suppression of prostitution and maintaining quarantine of infectious venereal disease cases.

Other organizations of a voluntary nature are contributing their efforts: The Honolulu Council of Social Agencies, which embraces Child and Family Service on referrals for rehabilitation and other aids; hospitals and settlements, such as the Palama Settlement; and industrial health units.

Related Problems

Some brief mention might be made of important related problems. These problems will be considered in detail in the report on social hygiene, but, because of their pertinence to the venereal disease control problem, deserve being called specifically to attention in this context.

These related problems include prostitution, delinquency, recreation and unmarried mothers, as well as other less significant problems. The prime necessity of suppressing prostitution if venereal disease incidence is to be reduced in the community is almost universally accepted by public health authorities, but has only recently gained adequate recognition in the Territory. This and other problems require further consideration.

Recommendations of

SUBCOMMITTEE ON OTHER COMMUNICABLE DISEASES

James R. Enright, M.D., Chairman
E. A. Fennel
F. H. Gaudin
Robert H. Onstott, M.D.*

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* Deceased

OUTLINE OF SUGGESTED RECOMMENDATIONS

Subcommittee on Other Communicable Diseases
of the
Committee on Communicable Diseases
Postwar Planning Committees for Health

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
I. Legal Status		
A. Control of communicable diseases vested in:		
1. Territorial Board of Health		
2. U.S. Public Health Service		
3. Board of Agriculture and Forestry--Division of Animal Industry.		
4. Physicians in private practice.		
5. Armed forces.		
B. Supporting legislation		
1. Board of Health, Chap. 35; Sec. 2007, 2019 (RLH 1945)		
2. Beauty Culture, Chap. 36; Sec. 2049 (RLH 1945)		
3. Food, Drugs & Cosmetics, Chap. 41; Sec. 2243-2244 (Poi) (RLH 1945)		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
4. Infectious and Communicable Diseases, Chap. 42; Sec. 2301-2304; 2306-2309; 2341, 2342 (RLH 1945)		
5. Common Nuisance, Chap. 242; Sec. 11100 (RLH 1945)		
6. Sec. 2010, Chap. 35, as amended Session Law 1945.		
7. Secs. 2305, 2331-2338 of Chap. 42; as amended Session Laws 1945.		
8. Rules and Regulations of the Territorial Board of Health: Chap. 1 (Sanitation); Secs. 47, 74, 78 Chap. 3 (Dairies); Secs. 129, 130 Chap. 5 (Communicable Diseases): Secs. 157-162-A Chap. 7 (Examination of School Children): Sec. 165 Chap. 8 (Vital Statistics) Sec. 186, Rule 2 Chap. 12 (Maternity Hospitals & Homes): Sec. 6		
9. Code of Federal Regulations, Title 42; Sec. 11 (Foreign Quarantine) and Sec. 12 (Interstate Quarantine)		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
10. Board of Commissioners, Agriculture and Forestry, Division of Animal Industry Reg. 4 (horses, mules and asses) sec. 1 (Infectious Equine Encephalomyelitis. Reg. 5 (Cattle) Secs. 1 and 2 (Brucella). Reg. 9 (Dogs and Cats) Sec. 1 (Quarantine). Reg. 12, Sec. 1 (Virus, pathogenic organisms, parasites)	It is recommended that:	It is recommended that:
(Note: Laws adequate)		
II. Personnel: (Adequate) Director Epidemiological Investigator Stenographers (2) Government Physicians (37)		
III. Program A. Prevention 1. Immunization Required by law: Smallpox - age 6 months Diphtheria - 9 months and children entering islands up to 10 years within 3 months	A booster diphtheria injection be required of all children prior to entering school.	A combined diphtheria-tetanus toxoid be used as an immunizing agent.

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
Triple typhoid - 3 years	It is recommended that:	
Roster of vaccinations kept in County Board of Health offices	The Board of Health conduct an educational program urging more widespread voluntary immunization against pertussis (Whooping cough)	
Vaccines and toxoids provided by the Board of Health free of charge to physicians and maternal and child health clinics for immunization of indigent or marginal patients.	All milk and milk products utilized in the Territory be pasteurized.	
	Further study be made of the water supply at strategic points of consumption to determine the needs for continuous chlorination.	
B. Control (See I - A) 1. Morbidity reports: a. Government physicians b. Physicians in private practice. c. Clinics d. Public health nurses e. U.S. Public Health Service f. Armed forces	Rheumatic fever be added to the list of reportable diseases in the Territory. Efforts be made to encourage more thorough reporting of all cases of reportable diseases by physicians.	

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
g. Hospitals h. Laboratories	It is recommended that:	It is recommended that:
Note: The official report of the American Public Health Association ("The Control of Communicable Diseases," Sixth Edition, 1945) has been adopted as official for the Territory of Hawaii.		
2. Diagnostic facilities: a. Consultative services of the Director, Bureau of Communicable Diseases. b. Consultative services of Bureau of Maternal and Child Health and specialists. c. Board of Health laboratories, Honolulu, Kauai, Maui and Hawaii.	The Board of Health staff be augmented by a technician qualified to do diagnostic tests on tropical diseases and initiate limited types of research in this field.	The University of Hawaii establish an institute for research in tropical diseases.
Note: Diagnostic services free for all physicians, government or private, for the detection of communicable diseases.		
d. Board of Health milk and water laboratories.		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
3. Mosquito Control: (See p. 51, "Hawaii's Sanitation Problems")*	It is recommended that: The United States Public Health Service station a medical entomologist in Honolulu at all times working on insect problems.	
4. Rodent Control (See p. 35, "Hawaii's Sanitation Problems")*	Regulations pertaining to adequate rat-proofing measures be strictly enforced in the Territory.	
5. Epidemiological Investigation a. Director of Communicable Diseases. b. Epidemiological investigator. c. Government physicians. d. Referrals to and from: Public Health Nursing Bureau; Bureau of Maternal and Child Health; Bureau of Crippled Children; Bureau of Sanitation; private physicians; armed forces; U.S.Public Health Service; Board of Health of various states and foreign countries.	All physicians be encouraged to report immediately any cases suspected of having typhoid, typhus, diphtheria, scarlet fever, poliomyelitis, smallpox, plague, food poisoning outbreaks and dengue fever; and the confirmation of these suspected cases be the responsibility of the Bureau of Communicable Diseases, Territorial Board of Health.	

* Postwar Planning Committee on Sanitation, 1946.

Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Suggestions and Recommendations for Long-range Objectives or Action
	It is recommended that:	
e. Epidemic control fund Sec. 2306, R.L.H.1945.	Hospitals accept responsibility of caring for cases of communicable diseases during an epidemic. Emergency epidemic or disaster control teams be established under the direction of the Territorial Board of Health.	
C. <u>Education</u> 1. Adult a. Professional groups - physicians and nurses. Done by professional staff of Territorial Board of Health and other physicians. <u>Methods</u>: Talks, films, slides, discussions at professional meetings and training schools - emphasis on diagnosis and control measures. b. Lay groups - general public (women's organizations, civic clubs, and industrial groups)		

Present Situation (Services and Resources)	Suggestions and Recommendations for	
	Immediate Action	Long-range Objectives or Action
Methods: Talks, films, slides, other visual aids, press, printed educational matter, and radio.		
Course in Communicable Disease Control to Queen's Hospital student nurses by Director of Communicable Disease Bureau.		
2. School age children		
a. Lectures by Board of Health personnel		
b. Charts and pamphlets listing various communicable diseases and value of immunization in conjunction with Department of Public Instruction.		
c. Class surveys for diphtheria carriers with explanation, in conjunction with public Health nursing service.		
IV. Cooperating Agencies		
A. Official		
1. Department of Public Instruction--education program for school age children.		

Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Suggestions and Recommendations for Long-range Objectives or Action
2. Department of Public Welfare--hospitalization of indigents with communicable diseases.		
3. Law enforcement--maintenance of quarantine; maintenance of immunization.		
4. U.S. Public Health Service--control of importation of quarantinable diseases; reporting of communicable diseases from off-shipping.		
5. Board of Commissioners of Agriculture and Forestry, Division of Animal Industry--control of importation of animal vectors of communicable diseases; control of anthrax.		
6. Armed forces--reporting and control of epidemics.		
B. <u>Voluntary</u>		
1. Council of Social Agencies Child and Family Service--referrals.		
2. Hospitals.		
3. Private and hospital laboratories - standardization of technique and reporting of positive findings..		

Present Situation	Suggestions and Recommendations for	
(Services and Resources)	Immediate Action	Long-range Objectives or Action
4. Palama Settlement--clinic facilities; general medical consultation. 5. National Foundation for Infantile Paralysis. 6. Shriners' Hospital 7. Territorial Medical Society and County Medical Societies. 8. Industrial health units.	It is recommended that:	
V. Related Problems		
A. Government Physicians		
1. Paid by Board of Health as government physicians and registrars of vital statistics, conducting maternal and child health clinics, venereal disease clinics, act as health officers of their districts, examine paroled lepers and psychiatric cases, perform autopsies, give school health examinations and make monthly and annual reports to the Bureau of Communicable Diseases.	The government physician's function should be one of public health and not therapeusis unless his geographic situation makes it mandatory.	

Present Situation (Services and Resources)	Suggestions and Recommendations for Immediate Action	Suggestions and Recommendations for Long-range Objectives or Action
2. Special fund under the Board of Health for purchase of drugs and supplies for the treatment of indigents. 3. Paid by Public Welfare for hospitalization of indigents.	It is recommended that:	It is recommended that: The care and treatment of indigents be the responsibility of the Department of Public Welfare.
B. Private Physicians Consultations, reporting and treating of communicable diseases.	The year's residence clause for licensure to practice medicine be repealed.	

COMMUNICABLE DISEASE

Introduction

The fight against communicable disease is an unending one which requires constant vigilance on the part of the doctor, public health authorities and an enlightened public. Adequate facilities and personnel also are necessary in order to carry out preventive measures and meet any exigency. Lack of specific prophylactic measures and insufficient knowledge regarding the cause of disease and the means through which it spreads are other factors which tend to make control measures exceedingly difficult. A sanitary environment always tends to mitigate the danger of epidemics; therefore, it is necessary that every precaution be taken to eliminate potential hazards such as improper disposal of sewage and other wastes. Protection of potable water and food supplies is likewise important in blocking the spread of certain diseases. An unprotected water and milk supply constitutes a potential vehicle for transmission of such diseases as streptococcic sore throat, scarlet fever, diphtheria, typhoid fever, and other water-borne diseases. Further study should be made of the Honolulu water supply system at strategic points of consumption to clarify the need for continuous chlorination. Serious consideration should also be given to insure safe and clean milk supplies through promulgation of milk ordinances and requiring all milk sold for public consumption in the Territory to be pasteurized.

Public education undertaken by the health department and schools should stress the necessity for periodic vaccination and immunization against the preventable diseases, also, the importance of good health habits in building up resistance to disease. Likewise, early diagnosis and treatment, isolation techniques, and measures designed to block the spread of disease should be emphasized.

Existing safeguards aim to prevent introduction of new diseases to the Territory through quarantine regulations, eliminate preventable diseases by use of prophylactic measures, and to minimize spread of those that cannot be completely controlled by attempting to block the route of travel through which the infection disseminates.

Legal Status

Current territorial laws are quite adequate. It must be realized though that any program to be effective must rely not only on territorial government agencies but also on federal laws and their enforcement as vested in the United States Public Health Service, the Bureau of Forestry and

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[illegible]

The [illegible] diseases [illegible] recovery [illegible] on the part of the [illegible], public health [illegible] and police [illegible] and [illegible] also [illegible] to [illegible] and [illegible] of [illegible] [illegible] which [illegible] [illegible] it is necessary that every [illegible] [illegible] of [illegible] in blocking the spread of [illegible] milk supply [illegible] [illegible] water supply system [illegible] points of consumption [illegible] for continuous [illegible] and clean milk supplies through pasteurization or [illegible] ordinances and requiring all milk used for public consumption to [illegible] to be pasteurized.

[illegible] the necessity for periodic vaccination and [illegible] prevent [illegible] of good health [illegible] to block the spread of [illegible]

[illegible] to [illegible] control of [illegible] the [illegible] of [illegible] which the [illegible].

[illegible]

[illegible] that any [illegible] better [illegible] water [illegible] not [illegible]

Agriculture, and the armed forces. The federal government is responsible for guarding against importation of disease from extra-territorial sources under two provisions of law and regulation, namely, foreign quarantine and inter-state quarantine. The former covers epidemic typhus, plague, leprosy, cholera, yellow fever, smallpox and anthrax. Public Health Service jurisdiction over other communicable diseases under this provision is nil. However, the Service does cooperate and notifies the Territorial Board of Health about cases of communicable diseases other than quarantinable, which are recognized when a vessel passes through quarantine. Vessels arriving in Honolulu from other United States ports are not subject to inspection unless the master displays the quarantine flag. Any illness aboard the vessel is defined as cause to display the quarantine flag; however, if under the stated circumstances a master violates the law in this respect, evidence of such violation must be obtained before charges could be presented.

Diphtheria, measles, whooping cough, epidemic cerebrospinal meningitis, anterior poliomyelitis, Rocky Mountain spotted fever, tick fever, syphilis, gonorrhea, chancroid, influenza, pneumonia, epidemic encephalitis, septic sore throat, rubella, chickenpox, psitticosis, typhoid, paratyphoid fever, dysentery, pulmonary tuberculosis and scarlet fever are subject to interstate regulations.

Common carriers cannot knowingly accept for transportation in interstate traffic persons suffering from the above enumerated diseases, unless removal and entrance permits have been granted by the state or local health officer at the place of departure and arrival. Not only are carriers prohibited from carrying persons infected but "no person knowing that he is in a communicable stage of any of the diseases enumerated shall travel." Persons with plague, smallpox, cholera, yellow fever and typhus are barred from all interstate travel and persons with leprosy, tuberculosis and venereal diseases are subject to special measures. Prior to revision of the regulations in 1945 the penalties for violation of interstate quarantine measures were very nebulous. Even under the new law which for the first time would appear to establish clear penalties, it is doubtful if the routine enforcement of such regulations would be practical. However, such might not be the case in Hawaii when all traffic is controllable, and the problem of private conveyances is negligible.

Further study of this problem should be made by the United States Public Health Service in cooperation with Territorial health officials in an effort to develop workable regulations designed to minimize the introduction of diseases from other areas.

Morbidity

Morbidity data is submitted regularly to the Territorial Board of Health by hospitals, laboratories, United States Public Health Service, schools,

the armed forces, clinics, public health nurses, government and private agencies.

It is essential that all cases of reportable communicable diseases be reported promptly, because no health department can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring. It is especially important that physicians report promptly to the health department for study and confirmation of diagnosis cases suspected of having diphtheria, dengue fever, food poisoning, plague, poliomyelitis, scarlet fever, smallpox, typhus and typhoid fever. In order to encourage more punctual and complete reporting, report forms should be more simplified to minimize the time required to report essential information.

Rheumatic fever appears to be on the increase in Hawaii. Because of the serious sequelae frequently associated with this disease, it should be added to the list of reportable diseases in the territory. This procedure will enable health authorities definitely to determine its importance here, make possible the referral of such cases (with private physicians' consent) to the proper agencies for follow-up so as to minimize the effects of potential heart damage resulting from this disease.

Personnel and Facilities

Because of the insidious nature in which epidemics start and the explosive manner in which they spread, the Bureau of Communicable Diseases of the Territorial Board of Health should have trained personnel and adequate facilities to cope with any emergency that might arise. The current staff is satisfactory for handling what may be considered routine conditions. However, a person qualified to do diagnostic tests on tropical diseases and initiate limited types of research in this field should be added to the Health Department staff. Although the territory is free from tropical diseases, the spread of modern transportation and the close proximity to areas where they are endemic, makes it necessary that a constant watch be kept to prevent their introduction. Consideration should also be given to the establishment of an institute of tropical diseases in Honolulu, under the auspices of the University of Hawaii or the Territorial Board of Health.

Laboratories are maintained by the Territorial Board of Health on the islands of Oahu, Kauai, Maui, and Hawaii. Diagnostic services for communicable diseases are provided free to all physicians.

Program

Diphtheria, smallpox and typhoid fever control measures have been carried out with excellent results in the territory for years. Smallpox has been non-existent for 34 years. Typhoid immunization of the entire popula-

tion over three years of age was started in 1942 as a defense measure required by the military government. In 1945 it became mandatory by civil law. Diphtheria immunization for children between the ages of nine months and ten years of age was also made compulsory in 1945. Immunity resulting from vaccination and immunization tends to wane in many persons after a period of years. Therefore, it is important that all children receive a "booster shot" for diphtheria upon entering school as a means of reactivating their immunity. This is especailly important because the highest incidence of this disease occurs in the five through nine year age group. However, more deaths occur in children under five years of age. Physicians should be urged to give a combined diphtheria and tetanus toxoid because it does not increase the number of injections required and besides the combined dosage does not impair the immunity produced against either disease. Protection against "lockjaw" should be provided because incidence of the disease in the territory is much higher than in mainland communities. This will also make possible the keeping of a tetanus register by the Territorial Board of Health. Information can then be made available to private physicians which will be of value in treatment of puncture wounds. Protection against pertussis (whooping cough) is urged but should be given on a voluntary basis by private physicians. The cumulative diphtheria immunization records of the Board of Health can be made more complete if the Department of Public Instruction will submit within the first month of school every year, a record of all children who have not been immunized upon entering school. The Bureau of Communicable Disease will then be in a position to undertake a follow-up program on such cases and to maintain a high degree of protection against the disease at all times. Vaccinations and immunizations may also be obtained in the child health conference clinics sponsored by the Board of Health. However, responsibility for providing these services should rest with private physicians at least until the child is one year of age.

The efficacy of requiring compulsory protection against diphtheria, smallpox, and typhoid fever is well reflected in the drastic reduction in incidence of these diseases throughout the territory.

The fact that insects are closely associated with control of certain communicable diseases necessitates that a program of continuous light trapping of insects be carried on and in surrounding areas adjacent to airports by the United States Public Health Service. This will tend to mitigate against potential importation of dangerous disease vectors that might otherwise become established. Such a program should be coordinated with the activities of the division of mosquito control, Territorial Board of Health.

In the interests of typhus fever and plague control, emphasis should be placed on enforcing a territorial-wide program of more adequate rat proofing of all types of buildings. Police power should be utilized to control violators if necessary.

Designated private physicians handle communicable diseases in the rural

areas. They are employed on a part-time basis by the Board of Health, act as health officers and conduct special clinics. They also receive special funds from the Board of Health for the purchase of drugs and supplies for treatment of indigents.

The function of these physicians as government doctors should continue to be one of public health and not therapeusis unless their geographic situation makes it necessary. Care and treatment of the indigent sick should be the responsibility of the Department of Public Welfare.

Honolulu Chamber of Commerce
Public Health Committee